CLAIM OR CLAIMS

I claim:

1. A linear stage comprising:

a screw-nut assembly connecting the opposite sliding plates, in which the rotational motion of the screw translates into a rectilinear motion; said screw-nut assembly having in addition to the screw, a nut-housing and a nut; said nut connected to the nut-housing and let to pivot perpendicular to the axis of the screw; said nut having an internal thread and a contiguous round excision, resulting in the partial removal of the internal thread; and said nut having the center point of the imaginary circumference projected by the partial internal thread in the same geometric plane than the pivoting point; and

compression springs inserted between the nut and the nut-housing, for producing a radial preload and an axial preload on said nut with respect to the screw; and said radial preload for engaging the internal thread of the nut and the external thread of the screw and for eliminating any play between the inner thread of the nut and the outer thread of the screw; and said axial preload for eliminating any play between the nut and the nut-housing.

2. A linear stage as recited in claim **1** wherein the rotational motion of the screw is manual or motor driven.

3. A screw-nut assembly as recited in claim **1** wherein there is no permissible axial play between said nut and said nut-housing; said nut having only radial preload to connect the inner threads of the nut and outer threads of the screw and to eliminate backlash.

4. A screw-nut assembly as recited in claims **1** and **2,** having a nut with a full internal thread.

5. A screw-nut assembly as recited in claim **1** wherein a force greater an opposite to the radial preload is applied on said nut, resulting in the disconnection of the inner thread of the nut and the outer thread of the screw, and freeing the sliding plates of the stage as recited in claim **1**, to generate a rectilinear motion without requiring the rotational motion of the screw.

6. A screw-nut assembly as recited in claim **4** wherein the force greater an opposite to the radial preload being applied on said nut is removed, resulting in the engagement of the

internal thread of the nut and the external thread of the screw, and enabling the rotational motion of the screw to be translated into a rectilinear motion.

7. A plurality of linear stages as recited in claim **1** concatenated with one another forming a multi-axis positioning device; said multi-axis positioning device having screw-nut assemblies as recited in claims **1**, **2**, **3**, **4, 5** and **6**.